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Hawaii Renewable Energy Alliance

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PUBLIC UTILITIES COMMISSION

June 19, 2009

The Honorable Chairman and Members of the
Public Utility Commission
465 S. King Street
Honolulu HI 96813

Subject: Docket No. 2008-0274: Instituting a Proceeding to Investigate Implementing a Decoupling Mechanism for Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc. and Maui Electric Company, Limited.

Re: Identification of Experts for Panel Hearing

Dear Commissioners:

Hawaii Renewable Energy Alliance ("HREA") identifies its President, Warren S. Bollmeier II, as its expert for all eight panels of the June 29 to July 2, 2009 Panel Hearing on the subject docket. Mr. Bollmeier's resume is attached.

This letter is being served on June 19, 2009 as follows: two copies by hand-delivery to the Consumer Advocate and to the rest of Parties by electronic transmission.

Sincerely,

Warren S. Bollmeier II
President

RESUME
WARREN S. BOLLMEIER II

PROFESSIONAL SUMMARY

Mr. Bollmeier has 38 years of experience in solving technical, management and personnel problems. He has 32 years of experience in supervising and managing renewable energy projects and activities for government and private clients. He has extensive, detailed knowledge of and expertise in wind and solar and hybrid system technologies. He also has a working knowledge of biomass, geothermal, hydro, hydrogen, ocean and wave resources and energy conversion technologies. He has managed government-sponsored research, development and demonstration ("RD&D) projects with a variety of industry, utility and other collaborative partners. He has developed and maintained a detailed knowledge of the design and deployment of renewable energy systems for remote power, village power, distributed generation and commercial utility applications. He has extensive, detailed knowledge and experience in developing and promoting energy policy issues at utility, state and federal levels. He is also working to develop new renewable projects in Hawaii.

Mr. Bollmeier has the abilities to provide clear definition of problems and to form and work with teams to implement sound projects and activities. He has excellent communication skills and has worked with a variety of U.S. and foreign government agencies, laboratories, universities, private organizations, industry, utilities and environmental advocacy groups. He has managed numerous projects both in the U.S. and overseas.

PROFESSIONAL EXPERIENCE

Wind Project Development (1996 to present). Mr. Bollmeier (dba as WSB-Hawaii) consulted with: (i) General Electric Wind Energy (formerly Enron Wind Corporation, formerly Zond-Pacific), Tehachapi, CA, to develop two windfarms in Hawaii, one on the island of Hawaii at Kahua Ranch (10 MW) and one on Maui at Kaheawa Pastures (20 MW). This work included preparation of an environmental impact statement for the Kaheawa windfarm on state conservation land, and (ii) Hawi Renewable Development on their 10 MW windfarm at Hawi on the Big Island. He is also working with three wind turbine manufacturers to introduce their turbines to the Hawaiian market. These include Southwest Wind Power (Flagstaff, Arizona), Entegrity Wind Systems, Inc. (Boulder, CO) and Windflow Ltd. (Christchurch, New Zealand). The first two companies specialize in distributed applications, the latter in commercial windfarm applications. Mr. Bollmeier continues to look for other development opportunities in Hawaii.

Renewable Energy Study (2003). Mr. Bollmeier conducted a study of renewable energy and unconventional energy resources for the Hawaii Energy Forum, Honolulu, Hawaii[1]. The objective of this study was to develop and evaluate a working database of potential *wind, solar* and *biomass* projects and other commercial activities for the generation of electricity in Hawaii over a 30 year period, and to examine possible frameworks for evaluating the resulting economics impacts. The key outputs were the preparation of a strategy to phase in renewables into the electric utility grids, an evaluation of the potential for alternative public policy options to facilitate the implementation process, and a preliminary assessment of the overall economic impacts to the state. The key results indicate that Hawaii could reach a state wide renewable electricity fraction of over 28% by the year 2018 with the implementation of 19 wind, solar and biomass projects.

[1] For details of this study, please see: http://hawaiienergypolicy.hawaii.edu/papers/bollmeier.pdf.

Energy Policy Issues (1993 to present). Mr. Bollmeier has participated as an advisor to Hawaiian Electric Company (HECO) on their Integrated Resource Plan (IRP) since 1993 and with Maui Electric Company (MECO) on their IRP since 2004. In 1994 to 1995, he participated on a docket at the Hawaii Public Utility Commission (HPUC) investigating the role of renewables in Hawaii's utility market. In 1995, he helped form the Hawaii Renewable Energy Alliance ("HREA") to promote the increased use of renewables in Hawaii. As President of HREA since 2000, he has been working closely with State Legislators, the utility, state agencies, industry members, environmental activist groups and others to secure a renewable future for Hawaii. Mr. Bollmeier has led HREA's intervention in the numerous HPUC dockets including: (i) Competition and Restructuring (No. 96-049), (ii) Distributed Generation (No. 03-0371), (iii) Competitive bidding for new generation (No. 03-0372), (iv) Demand-side management and energy efficiency (No. 05-0069), (v) Net energy metering (No. 2006-0084), (vi) Solar Water Heating Pay As You Save Program (No. 2006-0425), (vi) Renewable Portfolio Standards (No. 2007-0008), Public Benefits Fund Administrator (No. 2007-0323), Renewable Energy Infrastructure (No. 2007-0416), and Feed-In Tariffs (2008-0273), and Decoupling (2008-0274) for the Hawaiian Electric Company and its subsidiaries. Since 1995, Mr. Bollmeier has also led HREA's lobbying activities at the Hawaii State Legislature, and played an active role in gaining support for extension of our states renewable energy tax credits and establishing Hawaii's net energy metering and renewable portfolio standard laws

Solar Policy Analysis Workshop, Honolulu, HI, 1997. Mr. Bollmeier organized, coordinated and led a workshop for USDOE/NREL and the State Energy Office on solar policy options for Hawaii. The successful workshop included discussion of the State of Hawaii's solar tax credits, green pricing programs, net energy metering and broad- based policy support initiatives.

Sustainable Home Energy Use Guide, County of Maui,1996. Mr. Bollmeier prepared a consumer-oriented guide for Maui County residents. The guide includes energy-efficiency, solar-hot water collector, photovoltaic system and small wind turbine options for home owners.

Wind/Pumped-Hydro Integration and Test, Pacific Center for High Technology Research (PICHTR), 1992 to 1994. Mr. Bollmeier managed a $550K project on the Island of Hawaii (Kahua Ranch) to demonstrate the integration of wind with pumped-hydro storage for utility application. The project included participation from the State of Hawaii Department of Business, Economic Development and Tourism (DBEDT)-Energy Division, the Hawaii Natural Energy Institute, Kahua Ranch Limited, and the Hawaii Electric Light Company.

Downhole Coaxial Heat Exchanger (DCHE) Demonstration, 1990 to 1993. Mr. Bollmeier managed a $560K, U.S.-Japan project to demonstrate the DCHE concept. The U.S. partners included PICHTR and DBEDT. The Japanese partners included the Ministry of International Trade and Industry (MITI) and Sumitomo Engineering Company. An experimental test evaluation was performed at the HGP-A geothermal site on the Island of Hawaii.

Cooperative Field Test Program, SERI, 1984 to 1989. Mr. Bollmeier managed 13 cooperative research agreements for USDOE with wind industry partners. The projects included testing of utility scale wind turbines and siting studies ($2.3M total value).

Wind Energy Conversion Systems (WECS) Technology Group, Small Wind System Program, 1982-1984. Mr. Bollmeier managed a small group of engineers and technicians that were responsible for field testing of commercial wind turbines in California. He participated in the early development of standards for wind turbines and related technologies.

Wind Energy Assessment, USDOE/Government of Yugoslavia, 1984. Mr. Bollmeier was a member of a USDOE team which assessed wind energy potential in Yugoslavia.

Wind Turbine Demonstration Project, USAID, Cape Bon, Tunisia, 1983 to 1984. Mr. Bollmeier managed a demonstration project for USAID in conjunction with the Solar Projects Office, NASA, Plumbrook, Ohio. He coordinated with the Tunis Mission Office and the Tunisian Electricity and Gas Company (STEG). The project included resource and site assessment, design, procurement, pre-commissioning tests, packaging, shipment and installation of two 10 kW wind turbines at Cape Bon, Tunisia.

Hybrid-Energy System Project, 1982 to 1983. Mr. Bollmeier managed a hybrid energy system project for the U.S. Army, Ft. Huachuca, AZ. The project included design and testing of a complete system consisting of three small wind turbines (total of 5 kW), two photovoltaic systems (total of 3 kW), a battery and control system.

System Development Group Manager, Small Wind Systems Program, 1980 to 1982. Mr. Bollmeier managed the System Development Group (three engineers and one administrative assistant) and directed 14 separate projects for new wind turbine designs ($15M total value). The project included design, fabrication, and testing of prototype units at Rocky Flats, CO.

Technical Monitor, Small Wind Systems Program, 1997 to 1980. Mr. Bollmeier managed three subcontracts ($1.7M total value) for the development of small (1 to 2 kW), high-reliability, wind turbines for remote applications. Two of these contractors subsequently commercialized wind turbines for remote and village power applications.

Project Engineer, Solid Rocket Division, Air Force Rocket Propulsion Laboratory, Edwards AFB, CA, 1974 to 1977. As an USAF Captain, Mr. Bollmeier was responsible for two RD&D projects ($3.1M total value) to develop solid rocket motors for upper stage launch vehicles. He also provided technical support to the Space Defense Vehicle and Space Shuttle Programs.

Systems Engineer, Engineering Division, Air Force Plant Representative Office, Lockheed-Georgia Company, Marietta, Georgia, 1971 to 1974. As an USAF lieutenant, Mr. Bollmeier approved production design changes to the C-5A landing gear, ground-support and personnel subsystems, and monitored Lockheed's system safety and human engineering programs.

EDUCATION

B.S., Aerospace Engineering, University of Texas-Austin, Austin, TX, 1969
M.S., Aeronautical-Mechanical Engineering, Air Force Institute of Technology, Dayton, OH, 1971
M.B.A., Management, Georgia State University, Atlanta, GA, 1973

PROFESSIONAL ORGANIZATIONS

American Society of Mechanical Engineers
American Solar Energy Society
American Wind Energy Association
Geothermal Resources Council
Hawaii Renewable Energy Alliance

TECHNICALREPORTS/PUBLICATIONS

List available upon request.

Special Awards

1983: AWEA Government Person of the Year
2003: Wind Powering America – Regional Wind Advocacy Award

MAILING ADDRESS

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